

INTERNATIONAL SEARCH REPORT

Int. Application No

PCT/IT 03/00779

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 E21B43/12

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 E21B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 02/38911 A (HALL CRAIG MELVIN ; STEPHENS RICHARD DALE (CA); HARDING RICHARD PAT) 16 May 2002 (2002-05-16)	29-32
A	page 4, line 8 - page 6, line 8; figures 1,2,6	20-28
A	US 5 551 510 A (MILLS ROBERT A R) 3 September 1996 (1996-09-03) column 4, line 17 - line 51 column 6, line 4 - line 53; figures 4,5	1
A	US 2001/050168 A1 (HULT VERN A) 13 December 2001 (2001-12-13) cited in the application paragraph '0044! - paragraph '0046!; claims 46-63; figures 3-6,14-21	1
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- * & * document member of the same patent family

Date of the actual completion of the international search

23 June 2004

Date of mailing of the international search report

07. 07. 2004

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2002/066572 A1 (MUTH GAROLD M) 6 June 2002 (2002-06-06) claims 1-8; figure 6 see stuffing box 236 and seals 248, 250. -----	1
A	GB 962 576 A (RHEINSTAHL WANHEIM G M B H) 1 July 1964 (1964-07-01) figures 5,6,8,9 -----	33
A	GB 2 124 111 A (MASCHF AUGSBURG NUERNBERG AG) 15 February 1984 (1984-02-15) abstract; figure 3 -----	33
A	GB 693 100 A (ANCIENS ETS J HOTTIAUX) 24 June 1953 (1953-06-24) figure 9 -----	33

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national application No.
PCT/IT 03/00779

Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-32

1.1. Claims: 1-28

Pump drive head with integrated stuffing box

1.2. Claims: 29-32

Jaw clamp for locking a rotary pump drive shaft by a push-pull reaction between the jaws.

2. Claims: 33-37

Jaw clamp for locking a rotary pump drive shaft by a self centering reaction between the jaws and the inner surface of a sliding body of the clamp.

Please note that all inventions mentioned under item 1, although not necessarily linked by a common inventive concept, could be searched without effort justifying an additional fee.

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Information on patent family members

International Application No

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 0238911	A	16-05-2002	US 6557643 B1 AU 1250202 A BR 0113642 A CA 2331915 A1 WO 0238911 A1	06-05-2003 21-05-2002 14-10-2003 10-05-2002 16-05-2002
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GB 2124111	A	15-02-1984	DE 3223748 A1 NL 8302030 A	29-12-1983 16-01-1984
GB 693100	A	24-06-1953	NONE	